

AMENDED IN ASSEMBLY JUNE 19, 2012

AMENDED IN SENATE APRIL 16, 2012

AMENDED IN SENATE APRIL 9, 2012

**SENATE BILL**

**No. 1298**

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**Introduced by Senator Padilla**

February 23, 2012

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An act to add Division 16.6 (commencing with Section 38750) to the Vehicle Code, relating to vehicles.

LEGISLATIVE COUNSEL'S DIGEST

SB 1298, as amended, Padilla. Vehicles: autonomous vehicles: safety and performance requirements.

Existing law requires the Department of the California Highway Patrol to adopt rules and regulations that are designed to promote the safe operation of specific vehicles, including, among other things, schoolbuses and commercial motor vehicles. *Existing law also requires the Department of Motor Vehicles to register vehicles that are being operated in this state and to issue a license plate to an applicant for the operation and identification of that person's vehicle.*

This bill would authorize the operation of an autonomous vehicle, as defined, on public roads by a ~~licensed driver who possesses the proper class of license for the type of vehicle being operated if either of 2~~ *an application is submitted to the Department of Motor Vehicles and either of 2 conditions applies, including, among other things, that the manufacturer of the autonomous technology certifies that the autonomous vehicle has a mechanism to engage and disengage the autonomous technology that is easily accessible to the operator and are met. The first condition is that the driver be seated in the driver's seat,*

*monitoring the safe operation of the autonomous vehicle, and be capable of taking over immediate manual control of the autonomous vehicle in the event of an autonomous technology failure or other emergency, and the 2nd condition is that the manufacturer of the autonomous technology provides, among other things, that the autonomous vehicle has a mechanism to engage and disengage the autonomous technology that is easily accessible to the operator. The bill would require that the autonomous vehicle's technology meets all federal Motor Vehicle Safety Standards for the vehicle's model year and all other applicable safety standards and performance requirements set forth in state and federal law and the regulations promulgated pursuant to those provisions laws.*

*The bill would require, until January 1, 2017, that, until such time that an autonomous vehicle meets the requirements established by the National Highway Traffic Safety Administration (NHTSA) for the operation of autonomous vehicles without the presence of a licensed driver, or the State of California establishes regulations or standards for the operation of autonomous vehicles, an autonomous vehicle may not be operated on public roads unless a licensed driver is seated in the driver's seat of the vehicle. The bill would also authorize the Department of the California Highway Patrol, in consultation with the Department of Motor Vehicles, to recommend to the Legislature additional requirements for the safe operation of autonomous vehicles on California's public roads, including, among other things, specific recommendations for the operation of an autonomous vehicle without the presence of a licensed driver require, prior to January 1, 2014, the Department of Motor Vehicles to adopt regulations setting forth requirements for the submission and approval of an application to operate an autonomous vehicle and would provide that federal regulations promulgated by HNHTS supersede state law or regulation when found to be in conflict.*

Vote: majority. Appropriation: no. Fiscal committee: yes.  
State-mandated local program: no.

*The people of the State of California do enact as follows:*

- 1 SECTION 1. Division 16.6 (commencing with Section 38750)
- 2 is added to the Vehicle Code, to read:

DIVISION 16.6. AUTONOMOUS VEHICLES

38750. The Legislature finds and declares all of the following:

(a) Development is actively under way of new technology that, through the use of computers, sensors, and other systems, permits a motor vehicle to operate without the active control and continuous monitoring of a human operator. Motor vehicles with this technology, referred to as “autonomous vehicles,” offer significant potential safety, mobility, and commercial benefits for individuals and businesses in the state and elsewhere.

(b) Autonomous vehicles have been operated safely on public roads in the state in recent years by entities developing and testing this technology.

(c) The State of California, which presently does not prohibit or specifically regulate the operation of autonomous vehicles, desires to encourage the current and future development, testing, and operation of autonomous vehicles on the public roads of the state. The state seeks to avoid interrupting these activities while at the same time creating appropriate rules intended to ensure that the testing and operation of autonomous vehicles in the state are conducted in a safe manner.

(d) Toward that end, the Legislature finds it appropriate to authorize the establishment of specific safety requirements for the testing and operation of autonomous vehicles, and to require that future testing and operation of autonomous vehicles in the state comply with those requirements.

38751. (a) For purposes of this division, the following definitions apply:

(1) “Autonomous technology” means technology that has the capability to drive ~~the a vehicle on which it is installed~~ without the active *physical* control or ~~continuous~~ monitoring by a human operator.

(2) (A) “Autonomous vehicle” means any vehicle equipped with autonomous technology *that has been integrated into that vehicle*.

(B) An autonomous vehicle does not include a vehicle that is equipped with one or more collision avoidance systems, including, but not limited to, electronic blind spot assistance, automated emergency braking systems, park assist, adaptive cruise control, lane keep assist, lane departure warning, traffic jam and queuing

1 assist, or other similar systems that enhance safety or provide driver  
2 assistance, but are not capable, collectively or singularly, of driving  
3 the vehicle without the active control or monitoring of a human  
4 operator.

5 (3) An “operator” of an autonomous vehicle is the person who  
6 is seated in the driver’s seat or causes the autonomous technology  
7 to engage.

8 ~~(3)~~

9 (4) A “manufacturer” of autonomous technology is the person  
10 as defined in Section 470 that originally manufactures a vehicle  
11 and equips autonomous technology on the originally completed  
12 vehicle or, in the case of a vehicle not originally equipped with  
13 autonomous technology by the vehicle manufacturer, the person  
14 that modifies the vehicle by installing autonomous technology to  
15 convert it to an autonomous vehicle after the vehicle was originally  
16 manufactured.

17 (b) An autonomous vehicle may be operated on public roads  
18 by a ~~licensed~~ driver *who possesses the proper class of license for*  
19 *the type of vehicle being operated* if either of the following applies:

20 (1) The autonomous vehicle is being operated on roads in this  
21 state solely by employees, contractors, or other persons designated  
22 by the manufacturer of the autonomous technology for testing  
23 purposes. ~~For testing purposes, a human operator shall be present~~  
24 ~~in the autonomous vehicle such that he or she has the ability to~~  
25 ~~monitor the vehicle’s performance and intervene, if necessary,~~  
26 ~~unless the vehicle is being tested or demonstrated on a closed~~  
27 ~~course.~~ *The driver shall be seated in the driver’s seat, monitoring*  
28 *the safe operation of the autonomous vehicle, and capable of taking*  
29 *over immediate manual control of the autonomous vehicle in the*  
30 *event of an autonomous technology failure or other emergency.*  
31 Prior to the start of testing in this state, the ~~entity~~ *person* performing  
32 the testing ~~must~~ *shall* obtain an instrument of insurance, surety  
33 bond, or proof of self-insurance in the amount of five million  
34 dollars (\$5,000,000).

35 (2) The manufacturer of the autonomous technology ~~certifies~~  
36 *provides* all of the following:

37 (A) The autonomous vehicle has a mechanism to engage and  
38 disengage the autonomous technology that is easily accessible to  
39 the operator.

1 (B) The autonomous vehicle has a visual indicator inside the  
2 cabin to indicate when the autonomous technology is engaged.

3 (C) The autonomous vehicle has a system to safely alert the  
4 operator if an autonomous technology failure is detected while the  
5 autonomous technology is engaged, and when an alert is given,  
6 the system shall do either of the following:

7 (i) Require the operator to take control of the autonomous  
8 vehicle.

9 (ii) If the operator *does not or* is unable to take control of the  
10 autonomous vehicle, ~~the autonomous vehicle shall be equipped~~  
11 ~~with technology capable of moving the autonomous vehicle safely~~  
12 ~~out of traffic and coming to a complete stop.~~

13 ~~(D) If limitations of the autonomous technology installed on~~  
14 ~~the autonomous vehicle make it necessary for the operator to be~~  
15 ~~physically present inside the autonomous vehicle when the~~  
16 ~~autonomous technology is engaged, the~~ The autonomous vehicle  
17 shall allow the operator to take control in multiple manners,  
18 including, without limitation, through the use of the brake, the  
19 accelerator pedal, or the steering wheel, and it shall alert the  
20 operator that the autonomous technology has been disengaged.

21 (E) The autonomous vehicle's autonomous technology meets  
22 federal Motor Vehicle Safety Standards for the vehicle's model  
23 year and all other applicable safety standards and performance  
24 requirements set forth in state and federal law and the regulations  
25 promulgated pursuant to those laws.

26 (F) The autonomous technology does not adversely affect ~~make~~  
27 ~~inoperative any safety features of the autonomous vehicle that are~~  
28 ~~mandated by federal regulations~~ federal Motor Vehicle Safety  
29 Standards for the vehicle's model year and all other applicable  
30 safety standards and performance requirements set forth in state  
31 and federal law and the regulations promulgated pursuant to those  
32 laws.

33 (G) The autonomous vehicle has a separate mechanism, in  
34 addition to, and separate from, any other mechanism required by  
35 law, to capture and store the autonomous technology sensor data  
36 for at least 30 seconds before a collision occurs between the  
37 autonomous vehicle and another vehicle, object, or natural person  
38 while the vehicle is operating in autonomous mode. The  
39 autonomous technology sensor data shall be captured and stored  
40 in a read-only format by the mechanism so that the data is retained

1 *until extracted from the mechanism by an external device capable*  
2 *of downloading and storing the data. The data shall be preserved*  
3 *for three years after the date of the collision.*

4 (c) (1) *Until such time that an autonomous vehicle meets the*  
5 *requirements established by the National Highway Traffic Safety*  
6 *Administration (NHTSA) for the operation of autonomous vehicles*  
7 *without the presence of a licensed driver, the autonomous vehicle*  
8 *may not be operated on public roads unless a licensed driver is*  
9 *seated in the driver's seat of the vehicle, or the State of California*  
10 *establishes regulations or standards for the operation of*  
11 *autonomous vehicles, an autonomous vehicle may not be operated*  
12 *on public roads unless a licensed driver is seated in the driver's*  
13 *seat of the vehicle.*

14 (2) *This subdivision shall remain in effect only until January 1,*  
15 *2017, and as of that date is repealed, unless a later enacted statute,*  
16 *that is enacted before January 1, 2017, deletes or extends that*  
17 *date.*

18 (d) ~~The Department of the California Highway Patrol may, in~~  
19 ~~consultation with the Department of Motor Vehicles, recommend~~  
20 ~~to the Legislature additional requirements for the safe operation~~  
21 ~~of autonomous vehicles on California's public roads, including,~~  
22 ~~but not limited to, specific recommendations for the operation of~~  
23 ~~an autonomous vehicle without the presence of a licensed driver.~~

24 (d) *Except as provided in paragraph (1) of subdivision (b), an*  
25 *autonomous vehicle may not be operated on public roads unless*  
26 *the manufacturer first submits an application to the Department*  
27 *of Motor Vehicles that contains, at a minimum, all of the following:*

28 (1) *A certification by the manufacturer that the autonomous*  
29 *technology meets all of the requirements of paragraph (2) of*  
30 *subdivision (b).*

31 (2) *A certification that the manufacturer has tested the*  
32 *autonomous technology on public roads.*

33 (3) *A certification that the manufacturer will maintain a surety*  
34 *bond, or proof of self-insurance, in an amount of five million*  
35 *dollars (\$5,000,000), to compensate for losses due to injuries or*  
36 *property damage caused by a defect in the autonomous technology.*

37 (e) (1) *Prior to January 1, 2014, the Department of Motor*  
38 *Vehicles may adopt regulations setting forth requirements for the*  
39 *submission and approval of an application to operate an*  
40 *autonomous vehicle pursuant to this division. The department may*

1 *establish additional requirements by the adoption of regulations,*  
2 *which it determines, in consultation with the Department of the*  
3 *California Highway Patrol, are necessary to ensure the safe*  
4 *operation of autonomous vehicles on public roads.*

5 *(2) Nothing in this division shall limit or expand the existing*  
6 *authority to operate autonomous vehicles on public roads, until*  
7 *120 days after the Department of Motor Vehicles adopts the*  
8 *regulations authorized by this subdivision.*

9 *(f) Federal regulations promulgated by the National Highway*  
10 *Traffic Safety Administration shall supersede the provisions of*  
11 *this division when found to be in conflict with any other state law*  
12 *or regulation.*